## REMARKS

Claim 13 has been amended to address the 112 rejection, and to better define the claimed invention. More particularly, claim 13 has been amended to incorporate the limitations of claims 17 and 18, which have been cancelled. Claims 25-27 have been added to further define the scope of the present invention. New claim 25 combines elements from claim 13 and claim 23, which the Examiner has indicated would be allowable if rewritten in independent form. New claim 25 also incorporates elements from claims 17 and 18. No new matter was added by these amendments.

Turning to the art rejections, and considering first the rejection of claims 13, 15-20, 23, and 24, as under 35 U.S.C. § 103(a) as unpatentable over Hanson (U.S. Patent No. 4,366,386) in view of Scarpa (U.S. Patent No. 6,375,424) and Terracina (WO 02/42640 A1), independent claim 13 requires, in part, driving motors that rotatively drive respective rotary cylindrical columns about axes thereof, and an air flow device that generates an air flow component at least parallel with an axis of said rotary cylindrical column upon the outer peripheral surface of said rotary cylindrical column. Claim 13 also requires spiral shaped ribs extending from an outer peripheral surface of the rotary cylindrical column. Hanson does not teach the features mentioned above. The Scarpa and Terracina references do not supply the missing teachings of Hanson.

The Examiner cites Scarpa for teaching driving motors for rotating the rotating cylindrical columns. As mentioned in the previous amendment, Scarpa teaches away from the use of cylindrical columns with the embodiments contained therein, and therefore cannot be combined with Hanson to render claim 13 obvious. In fact, Scarpa cites Hanson (see col. 2, line 48) as an example of cylindrical columns, before stating that such geometrical

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configurations are **not suitable** for a rotating "blade" that must also rotate on a rotation axis (see col. 2, line 64, through col. 3, line 7). Thus, Scarpa teaches away from Hanson, and Scarpa and Hanson cannot be combined as suggested by the Examiner.

Terracina also teaches away from the use of cylindrical rotating columns, preferring instead a tapered profile (page 3, lines 31-35). Moreover, the Examiner misapplies Terracina as teaching an fin member that generates an air flow component parallel with the axis of the rotary column and in a direction departing from the rotary shaft upon the outer peripheral surface of the rotary column. Terracina does not teach a spiral shaped rib as required by Applicants' claims or the advantages thereof. Terracina has micro-fins 4 positioned adjacent the distal ends of his blades. According to Terracina, the micro-fins 4 receive a natural wind and are rotated about the blade 2 axis merely by wind force. See page 5, lines 26-31 of Terracina in which he explains: "at first part 3 . . .is rotated about the blade 2 axis, by the wind effect, the real speed of which is directed perpendicular to the plane of the wind generator 1, and angled with respect to the micro-fin 4". But Terracina doesn't explain how part 3 comes to be rotated about the blade 2 axis, by the wind effect.

Furthermore, Terracina makes no mention of generating an air flow component parallel with the axis of the rotary column, but rather reports of cutting air flow (page 5, line 33 and page 4, line 22). While Terracina provides an explanation about a Magnus effect "A Magnus effect will be obtained on the part 3 of the blade 2, since air flow is cut and consequently a bearing force is generated, perpendicular to the blade 2 axis, and lying in the wind generator 1 plane" (page 5, line 32 - line 34), based on Terracina's explanations, Terracina teaches merely that since air flow is cut consequently a bearing force is generated. Nowhere does Terracina

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mention improving the generator efficiency by increasing the rotor lift (increasing the Magnus lift), but merely generating Magnus lift.

Applicants' claimed invention has not "air flow cut device" like Terracina, but rather "driving motors that rotatively drive said respective rotary cylindrical columns about axes thereof" and "an air flow device comprises a rib in a spiral shape extending from an outer peripheral surface of said rotary cylindrical column". Thus, with Applicants' claimed invention, during the rotation of the rotary columns, it is possible to cause the air to evenly and stably flow upon wide surfaces of the rotary columns by means of the ribs in the spiral shape, thereby increasing the Magnus lift, and reducing wind noises (see Application page 5, lines 5-11).

Moreover, the micro-fins 4 of Terracina which are separated and found on part 3 would be expected to cause heavy wind noises, and would not cause the air to evenly and stably flow over the wide surfaces of the rotary columns for increasing the Magnus lift.

Furthermore, as part 3 of Terracina is rotated about the blade 2 axis by the wind effect, the rotating part 3 will couple to the other part of the blade 2. Thus, Terracina does not have (or for that matter need) driving motors to rotatively drive the respective rotary cylindrical columns about axes thereof. Accordingly, Terracina would not suggest or motivate the use of driving motors as in Scarpa, and it would not be obvious to combine Scarpa and Terracina. Thus, no combination of Terracina with Hanson and Scarpa can render obvious claim 13 or claims 15-20, 23, and 24 that depend thereon.

Turning to the rejection of claims 21 and 22 as obvious from Hanson in view of Scarpa and Terracina, and further in view of Shimizu (JP 06-316925), these claims are directly or indirectly dependent on claim 13. The deficiencies of the Hanson, Scarpa, and Terracina

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references vis-à-vis claim 13 are discussed above. The Examiner cites Shimizu as teaching Magnus type machine having rotary columns furnished with dimples. Even assuming arguendo Shimizu is as the Examiner states, as noted in the previous amendment Shimizu simply does not supply the missing teachings to Scarpa to achieve or render obvious claim 13 or claims 21 and 22 which depend thereon. Moreover, Shimizu teaches blades for a VTOL plane or helicopter, which is quite different from a Magnus type wind power generator. Thus, it is submitted that Shimizu is non-analogous art, and one skilled in the art would not look to combine Shimizu with Scarpa. Furthermore, even if Shimizu were combined with Scarpa, the contraindications of Scarpa, Hanson and Terracina would not be overcome by Shimizu. Thus, no combination of Hanson, Scarpa and Terracina with Shimizu reasonably could be said to achieve or render obvious claim 13 or claims 21 and 22 which depend thereon.

Having dealt with all the objections raised by the Examiner, the Application is believed to be in order for allowance. Early and favorable action is respectfully requested.

In the event there are any fee deficiencies or additional fees are payable, please charge them (or credit any overpayment) to our Deposit Account Number 08-1391.

Respectfully submitted,

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